REMARKS

Claims 1-12 are pending in this application. Claim 1 is in independent form. No claims are amended in response to the claim rejections.

Information Disclosure Statement

Applicants **again** request acknowledgement of receipt and consideration of the Information Disclosure Statement filed on November 17, 2006, or in the alternative, a reason why the references are not being considered by the Examiner.

Telephone Interview

A telephone interview was conducted on September 1, 2009 with Examiner Shuangyi Abu Ali to determine the Examiner's interpretation of the content of "Drawing 1" of the machine generated translation of JP 2003-268354 to Keiji. Examiner Ali indicated that she is interpreting the Y axis of the graph to be the percentage of growth rate of median particles of Si (relying on paragraphs [0013] and [0027]).

Rejections Under 35 U.S.C. §103

Claims 1-2, 4, 5, 7 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2003-268354 to Keiji. The rejection is respectfully traversed.

In rejecting the claims the Examiner states that the claims are unpatentable "as generally set forth in the previous office action mailed January 30, 2009." In the previous office action, it was alleged that Keiji renders the rejected claims obvious because Keiji discloses a fumed silica dispersion with a pH of 2-11 and a concentration of fumed silica of 1-50% by weight. It is

admitted in the Office Action that Keiji fails to disclose or suggest the rate increase of average particle diameter size, but alleges that "it would be expected the fumed silica dispersion mad[e] by a substantial similar process to have the same properties [(]the increased rate) absent any evidence to the contrary."

Applicants first submit that the process of Keiji is not substantially similar process that would necessarily result in a fumed silica having the same properties as those claimed. For example, in Keiji, an intermediate aqueous solution of fumed silica is prepared and this solution is added into a basic liquid. In contrast, the process described in the present case includes an acidic fumed silica dispersion being prepared and then diluted by water in order to be added to an alkali aqueous solution. This dilution step keeps a rate of increase of average particle diameter of abrasive grains in slurry low. Thus, the processes are not so substantially similar as to result in a silica dispersion having the same properties as claimed.

Further, based on the Examiner's reasoning that an allegedly similar process would produce the same results, it appears that the Examiner is relying on the principles of inherency to reject the claims. However, under the principles of inherency, the disclosure being relied upon must show that the natural result flowing from the operation of the device would result in the performance being claimed. *Hansgirg v. Kemmer*, 102 F.2d 212, 214, 40 USPQ 665, 667 (CCPA 1939). Thus, inherency requires that those things will always flow naturally from that which is disclosed in a prior art reference. *Application of Smyth*, 480 F.2d 1376, 1384, 178 USPQ 279, 285 (CCPA 1973).

Applicants respectfully submit the fumed silica polishing compound being made by the method of Keiji to have a fumed silica dispersion with a pH of 2-11 and a concentration of fumed silica of 1-50% by weight would not necessarily have an increase rate of average particle

diameter of fumed silica after a shake test for 10 days is 10% or less. For example, in Comparative Examples 1 and 2 disclosed in the specification, the concentration of fumed silica is 25% by weight and the pH is 11, yet the rate of increase average particle size is in excess of the claimed range of 10% or less. Similarly, in Comparative Example 3, the concentration of fumed silica is 12.5% and the pH is 10.5, yet the rate of increase average particle size is far in excess of the claimed range of 10% or less. Thus, there is no evidence that the polishing compound of Keiji would have the same properties as the claimed polishing compound. Moreover, as specific examples are shown where a polishing compound of fumed silica has silica concentrations and pH levels as in Keiji that do not exhibit the claimed properties, it would not be obvious that the polishing compound of Keiji would have the claimed properties, nor would such features be inherent.

Keiji also discloses a growth rate of median particles of about 50% or less. However, a prior art reference that does not disclose a specific embodiment in the claimed range does not correspond to the claimed range (see *Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991 (Fed. Cir. 2006)). In the present case, as may best be determined from the machine translation of Keiji, there is no disclosure of such an embodiment. Moreover, "the disclosure of a genus in the prior art is not necessarily a disclosure of every species that is a member of that genus" (Id 441 F.3d at 999). Finally, if the reference teaches a broad range...it may be reasonable to conclude the narrower claimed range is not disclosed with sufficient specificity to provide a basis to reject the claims (MPEP §2131.03(II)).

In the instant case, there is no embodiment in Keiji of "an increase rate of average particle diameter of fumed silica after a shake test for 10 days is 10% or less." There is also no

specificity of a range other than the board range of "about 50% or less." Thus, there is not sufficient specificity in Keiji to render the claimed range obvious.

Finally, in Keiji a silica concentration is 25% and an increase rate of median diameter is 400%. In contrast, Examples 1 and 2 disclosed in the specification, the silica concentration is 25% and the increase rate of average particle diameter is 1% or 2%. Thus, the dispersion stability of the claimed abrasive grains is clearly different from that of Keiji. For example, under a high-concentration condition where the abrasive grains easily aggregate, the dispersion stability of the claim polishing composition is extremely low and therefore superior to that of Keiji.

As Keiji fails to disclose or suggest the features of the rejected claims, withdrawal of the rejection is respectfully requested.

Claims 3, 6, 8, 9, 11 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Keiji in view of US Patent 7,211,122 to Iwasa. The rejection is respectfully traversed.

Claims 3, 6, 8, 9, 11 and 12 are allowable for their dependency on independent claim 1 for the reasons discussed above, as well as for the additional features recited therein.

For example, regarding dependent claim 3, it is admitted in the Office Action that Keiji fails to disclose or suggest "the average particle diameter of the fumed silica is in a range of 70 to 110 nm." In an effort to overcome the admitted deficiency, it is alleged that it would have been obvious to one of skill in the art at the time of the invention to use fumed silica having an average particle size as disclosed in Iwasa (i.e., an average diameter of 10-150).

However, it is at best unclear from the references how one of skill in the art would be expected to use the fumed silica of Iwasa to achieve an increase rate of average particle diameter after a shake test for 10 days is be 10% or less. Moreover, there is nothing in the references that

would indicate that the fumed silica of Iwasa would have the rate increase of average particle size as claimed. Simply alleging the use of the fumed silica particle of Iwasa provides no indication that such a particle would exhibit the claimed rate increase.

Applicants respectfully remind the Examiner that the teaching or suggestion to make the combination, and the reasonable expectation of success, must both be found in the prior art and not based on the Applicant's disclosure (MPEP § 2143). In making an assessment of the differences between the prior art and the claimed subject matter, 35 USC § 103 specifically requires consideration of the claimed invention "as a whole." The "as a whole" instruction in § 103 prevents evaluation of the invention on a part-by-part basis. Without this important requirement, an obviousness assessment might break an invention into its component parts, then find a prior art reference corresponding to each component. This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components (*Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275, (Fed. Cir. 2004)). "Further, decomposing an invention into its constituent elements, finding each element in the prior art, and then claiming that it is easy to reassemble these elements into the invention, is a forbidden ex-post analysis." (*In re Mahurker*, 831 Fed. Supp. 1801, 28 USPQ 2nd 1801).

In other words merely locating a fumed silica particle having a diameter similar to that claimed does not, without more, render the claim obvious. Therefore, withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the above remarks and amendments, Applicants respectfully submit that each of the rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Fitzpatrick at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By _____

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